

Advanced Topics in Molecular Biochemistry (CBCH 4320) Spring 2014

Course Director: Dr. Manuel Llano; BRB 3.144; mllano@utep.edu

Participating Faculty Members: Dr. Renato Aguilera, Dr. Igor Almeida, Dr. Marc Cox, Dr. Sid Das, Dr. Kyle Johnson, Dr. Manuel Llano, Dr. Rosa Maldonado, Dr. Hugues Ouellet, Dr. German Rosas-Acosta, Dr. Charles T. Spencer, Dr. Jianjun Sun, and Dr. Charlotte Vines.

Office Hours (Dr. Llano): By appointment.

Lecture: Tuesday 9:00 am to 10:20 am

Workshop: Thursday 9:00 am to 10:20 am

Location: Liberal Arts Building 205

Course Objectives: This is a team-taught course aimed at providing an overview of research methods and techniques in modern molecular biology and molecular biochemistry laboratories at our Department.

At the completion of this course, the students are expected to have achieved these specific learning objectives:

1. Understand the basic approaches used in molecular biochemistry.
2. Understand the principles underlying the approaches indicated above.
3. Be able to apply their knowledge of these techniques in the design of experimental procedures aimed at testing specific hypotheses.

Assessment of Course Objectives: A learning outcomes evaluation (self-assessment) will be handed out for you to complete at the same time that the course evaluation forms are completed.

Textbook: None. Topic-specific papers will be assigned by the instructor in charge of that specific topic as deemed necessary by each instructor.

Course Activities/Assignments:

Paper discussion: The instructor in charge will assign a research paper for discussion. The paper will be discussed at the end of each specific topic covered in class. The instructor in charge will provide an evaluation for the assigned paper. All the paper presentation evaluations will be assigned the same value toward the final grade of the course.

End-of-topic (EOT) quiz: At the end of each specific topic covered in class, the instructor in charge will provide an in-class quiz or a take home activity to evaluate the student's command of the topics covered on that specific topic. Although different instructors may choose to use a different type of quiz or take-home test, all end-of-topic quizzes will be assigned the same value toward the final grade of the course.

Grading: As indicated above, all paper discussions and end-of-topic quizzes will count equally toward the final grade. The quizzes and the papers will account for 75% and 25% of the grade, respectively. All instructors will evaluate their section with a paper and an end-of-topic quiz. The final grade will correspond to an average of the scores obtained by the student in all end-of-topic quizzes and papers throughout the semester. No final exam will be administered. Grading scale: A=90-100%; B=80-89%; C=70-79%; D=60-69%; F is <60%.

Make-up Policy: If you miss an end-of-topic quiz, your next end-of-topic quiz will count double toward your final grade. If you miss two consecutive end-of-topic quizzes and have no medical or family/personal emergency justification, you will get a grade of Zero (0) in the first end-of-topic quiz missed and your score in the next end-of-topic quiz will count double toward your final grade. Failure to take three end-of-topic quizzes due to a non-justifiable cause will result in an automatic final grade of F in the course. The same rule will apply for paper presentations.

Absence and Drop Policy: It is your responsibility to attend class regularly. If you have a serious illness or a legitimate excuse (includes military personnel called to active duty or training) for being out of town, make arrangements with me before you leave. The specific dates that the University has established for drop policy will be followed.

Academic Integrity Policy: UTEP's policies regarding academic integrity apply in this course. Information on this policy can be found at <http://academics.utep.edu/Default.aspx?tabid=23785>

Civility Statement: Please be respectful of all students' right to learn without disruptions. In keeping with this statement, please make an active effort to keep the talking to a minimum during lectures and presentations. Also make an active effort to either turn cell phones off or turn them to vibrate mode prior to the start of class.

Disability Statement: If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact The Center for Accommodations and Support Services at 747-5148 or at cass@utep.edu or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any accommodation letters and instructions.

Class Schedule:

Date	Speaker	Topic
Jan 23	Dr. Llano	Introduction
Jan 28	Dr. Llano	Evasion of innate immunity by HIV-1.
Jan 30	Dr. Llano	Paper discussion.
Feb 4	Dr. Cox	Alternative steroid hormone receptor targeting strategies for the treatment of prostate cancer.
Feb 6	Dr. Cox	Paper discussion.
Feb 11	Dr. Johnson	Mechanisms of Viral RNA Replication.
Feb 13	Dr. Johnson	Paper discussion.
Feb 18	Dr. Aguilera	The role of RAG1 and RAG2 proteins in oncogenic translocations.

Feb 20	Dr. Aguilera	Paper discussion.
Feb 25	Dr. Rosas-Acosta	The role of SUMOylation in viral infections
Feb 27	Dr. Rosas-Acosta	Paper discussion.
Mar 4	Dr. Spencer	Methods of study the innate immune response
Mar 6	Dr. Spencer	Paper discussion.
Mar 18	Dr. Almeida	Omics approaches for development of a vaccine for Chagas Disease.
Mar 20	Dr. Almeida	Paper discussion.
Mar 25	Dr. Maldonado	Immune and chemotherapy approaches against parasitic infections.
Mar 27	Dr. Maldonado	Paper discussion.
Apr 1	Dr. Sun	Pore formation and membrane translocation of bacterial A-B toxins
Apr 3	Dr. Sun	Paper discussion.
Apr 8	Dr. Ouellet	Role of cholesterol metabolism for infection and persistence of Mycobacterium tuberculosis
Apr 10	Dr. Ouellet	Paper discussion.
Apr 15	Dr. Das	Leukotriene, inflammation and metastatic migration of invasive breast cancer cells
Apr 17	Dr. Das	Paper discussion.
Apr 22	Dr. Vines	Methods of study tumor metastasis
Apr 24	Dr. Vines	Paper Discussion